

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of providing data of interest ~~information about a product, the product available for purchase from a plurality of web sites~~ sources, the method comprising:

~~receiving a selection of a product category from a predefined set of product categories using information about the product;~~

~~accessing a list of extraction parameters for the product category;~~

~~receiving a selection of at least one extraction parameter in the list of extraction parameters;~~

(A) for each of the plurality of respective web site W in said plurality of web sites ~~sources~~,

(i) ~~creating a corresponding program including~~ respective description of data of interest that identifying identifies the a corresponding web site W, the corresponding web site selling the product; and

(ii) ~~providing a tool for creating the corresponding program~~ developing an extraction pattern, based on output from the respective web site, that to extract extracts data information from the respective web site W using the at least one extraction parameter; and

(iii) associating the developed extraction pattern with the respective description of data of interest for the web site W;

(B) ~~receiving a connection from a client, the connection including a value that can be used as an extraction parameter for the developed extraction patterns for the at least one extraction parameter;~~ and

(C) ~~simultaneously providing, for each of the plurality of sources, product information for the product~~ obtaining said data of interest by querying web sites in the plurality of web sites using the value for the at least one extraction parameter and the extraction patterns associated with the respective descriptions of data of interest, wherein corresponding program, including:

when the ~~product information~~ data of interest includes ~~product information for data of interest from~~ at least two ~~sources web sites~~ of the plurality of ~~sources web sites~~, ~~simultaneously providing the product information for data of interest from~~ the at least two ~~sources web sites~~ is provided of the plurality of sources.

2. (Currently amended) The method of claim 1, wherein the ~~providing the tool for creating the corresponding program to extract data from the corresponding web site using the at least one extraction parameter further comprises providing~~ developing is performed using a graphical user interface tool for developing the corresponding program, the graphical user interface tool including that includes a web browser.

3. (Currently amended) The method of claim 2, wherein the graphical user interface tool further includes a first tool, the first tool for developing an extraction pattern, the extraction pattern identifying at least a plurality of portions portion of a the output of a document on the corresponding web site.

4. (Currently amended) The method of claim 3, further comprising:
~~receiving a selection signal;~~
 applying the extraction pattern to the output of the web site that is ~~find a matching pattern in a document~~ displayed in a source view in the web browser thereby identifying the at least a portion of the output for the web site; and
 displaying a rendered version of the ~~matching pattern~~ at least a portion of the output of the web site in a window.

5. (Original) The method of claim 3, wherein the graphical user interface tool further includes a plurality of predefined extraction patterns.

6. (Previously amended) The method of claim 5, wherein the plurality of predefined extraction patterns includes at least one of an extraction pattern for matching a hyperlink, an extraction pattern for matching a form, and an extraction pattern for matching a price.

7. (Currently amended) The method of claim 3, wherein the graphical user interface tool further comprises:

- identifying a form in the output of the web site;
- creating a step in the description of data of interest corresponding ~~program~~ to the web site, the step to submit the form without retrieving the web site document;
- generating a plurality of parameters associated with the step, ~~the~~ each parameter in said plurality of parameters corresponding to an inputs input in the form; and
- ~~identifying~~ associating a parameter in the ~~at least one of the~~ plurality of parameters with the ~~at least one~~ extraction parameter.

③ 8. (Currently amended) The method of claim 1, wherein the ~~providing the tool for~~ creating the corresponding program to extract data from the corresponding web site using the at least one extraction parameter developing an extraction pattern further comprises defining a plurality of steps wherein at least one step in the plurality of steps interacts with the ~~corresponding~~ respective web site and at least one step in the plurality of steps uses ~~operates on~~ the results of the interaction.

9. (Currently amended) The method of claim 8, wherein the defining the plurality of steps comprises [, for each of the plurality of steps,] receiving a selection of an extraction command from a predetermined list of extraction commands.

10. (Currently amended) The method of claim 9, wherein the predetermined list of extraction commands includes an extraction ~~commands~~ command for retrieving multiple matches of an extraction pattern from a web site document.

11. (Currently amended) The method of claim 9, wherein the predetermined list of extraction commands includes an extraction ~~commands~~ command for extracting data from a first ~~document~~ web site and a second web site document, the first ~~document~~ web site including a reference to the second web site ~~document~~.

12. (Currently amended) The method of claim 9, wherein at least one step in the plurality of steps includes a test condition comprising a logical test for at least one corresponding argument and a first step in the plurality of steps, and wherein the [program] respective description of data of interest continues executing at the first step when the logical test is satisfied.

13. (Original) The method of claim 12, wherein the at least one corresponding argument includes an extraction pattern.

14. (Currently amended) The method of claim 12, wherein the test condition further comprises a result code ~~, wherein the program that~~ returns an error when the output of the respective ~~the result code is a~~ web site has changed result code.

15. (Currently amended) The method of claim 12, wherein the test condition further comprises a result code ~~, wherein the program that~~ returns an error when ~~the result code is a no matching products result code~~ the output of the respective web site has no information about the product.

16. (Currently amended) The method of claim 9, wherein the predetermined list of extraction commands includes an extraction ~~commands~~ command for segmenting ~~a document~~ the output of the respective web site into a plurality of units, each of the plurality of units matching ~~an~~ the extraction pattern.

17. (Currently amended) The method of claim 16, wherein at least one step in the plurality of steps uses an extraction command to segment ~~a document~~ the output of the respective web site into a plurality of units, and wherein the step further includes a test condition that comprises ~~, the test condition comprising~~ a logical test and at least one argument, and wherein for each of the plurality of units, the logical test is computed with the at least one argument, and the unit is removed from the plurality of units if the logical test is not satisfied with the at least one argument.

18. (Currently amended) An apparatus for information of interest ~~providing information~~ about a product, the product available for purchase from a plurality of web sites sources, the apparatus comprising:

~~means for receiving a selection of a product category from a predefined set of product categories using information about the product;~~

~~means for accessing a list of extraction parameters for the product category;~~

~~means for receiving a selection of at least one extraction parameter in the list of extraction parameters;~~

(A) for each respective web site W in the plurality of web sites,

(i) means for creating a ~~corresponding program~~ respective description of data of interest that identifies the ~~for each of the plurality of sources, the means for creating a corresponding program for each of the plurality of sources including:~~

~~means for identifying a corresponding web site W, the corresponding web site selling the product, and~~

(ii) means for creating the corresponding program to extract ~~developing an~~ extraction pattern, based on output from the web site, that extracts data from the web site using the at least one extraction parameter; and

(iii) means for associating the developed extraction pattern with the respective description of data of interest for the web site W;

(B) means for receiving a connection from a client, the connection including a value that can be used as an extraction parameter in the developed extraction patterns ~~for the at least one extraction parameter; and~~

(C) means for obtaining said data of interest simultaneously providing product information for the product from each of the plurality of sources by querying web sites in the plurality of web sites using the value for the at least one extraction parameter and the developed extraction patterns associated with the respective descriptions of data of interest ~~corresponding program,~~

wherein, when the data of interest includes data ~~product information includes product information for from~~ at least two sources web sites of the plurality of web sites sources, the

means for providing product information ~~simultaneously provides the product information for~~
data of interest from the at least two sources of the plurality of sources.

19. (Currently amended) The apparatus of claim 18, wherein the means for ~~creating a~~
~~corresponding program to extract data from the web site~~ developing an extraction pattern
includes means for selecting an instruction from a predetermined list of instructions.

20. (Currently amended) The apparatus of claim 18, wherein the means for ~~creating a~~
~~corresponding program to extract data from the web site~~ developing includes a graphical user
interface tool that comprises means for developing an extractor pattern in a web browser.

21. (Currently amended) A computer data signal embodied in a carrier wave comprising:

(A) a software module ~~computer program~~ for ~~developing~~ creating a description of data of
interest, the software module including;

(i) a set of ~~instructions~~ operations for interactively developing an ~~extractor~~
extraction pattern, based on output of a target web site interactively, in the extraction pattern for
obtaining data of interest from a the target web site page;

(ii) a set of ~~instructions~~ operations for receiving a selection of an instruction from
a predefined set of instructions for inclusion ~~of the instruction~~ in the description of data of
interest;

(iii) a set of ~~instructions~~ operations for associating the ~~extractor~~ extraction pattern
with the instruction;

(iv) a set of ~~instructions~~ operations for testing the instruction using the ~~extractor~~
extraction pattern and the contents of a buffer, wherein the buffer includes a portion of the output
of the web site associated with the description of data of interest; and

(B) a software module ~~set of instructions~~ for using said description of data of interest to
obtain data of interest from the target web site when a value that can be used as an extraction
parameter for the developed extraction pattern is provided ~~when product information includes~~
~~product information for at least two sources from a plurality of sources, simultaneously~~
~~providing the product information for the at least two sources of the plurality of sources.~~

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22. (Canceled)

23. (New) The method of claim 1 wherein said extraction pattern comprises a pre-condition regular expression, a portion of data of interest regular expression, and a post-condition regular expression and wherein said developing comprises refining at least one of said pre-condition regular expression, said portion of data of interest regular expression, and said post-condition regular expression

24. (New) The method of claim 23 wherein said portion of data of interest regular expression includes a variable that is replaced with said value for said extraction parameter during said providing.

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25. (New) The method of claim 1 wherein the data of interest is provided incrementally as it is obtained from the plurality of web sites.

26. (New) The method of claim 1 wherein, the data of interest is obtained from the plurality of web sites and then presented simultaneously.

27. (New) The apparatus of claim 18 wherein said extraction pattern comprises a pre-condition regular expression, a portion of data of interest regular expression, and a post-condition regular expression and wherein said means for developing comprise refining at least one of said pre-condition regular expression, said portion of data of interest regular expression, and said post-condition regular expression

28. (New) The computer data signal of claim 21 wherein said extraction pattern comprises a pre-condition regular expression, a portion of data of interest regular expression, and a post-condition regular expression and wherein said operations for developing comprise refining at least one of said pre-condition regular expression, said portion of data of interest regular expression, and said post-condition regular expression

29. (New) The method of claim 1 wherein the data of interest is information associated with a product or information associated with a service.

30. (New) The apparatus of claim 18 wherein the data of interest is information associated with a product or information associated with a service.

31. (New) The computer data signal of claim 21 wherein said data of interest is a product, information, or a service.

32. (New) A computer implemented method of obtaining data of interest from a plurality of web sites comprising:

(A) developing a description of data of interest for each web site in said plurality of web sites, based on output from the plurality of web sites, each respective description of data of interest specifying an address for a corresponding web site in the plurality of web sites and each respective description of data of interest including an extraction pattern for extracting user specified information from the corresponding web site;

(B) receiving a value that can be used as an extraction parameter for the developed extraction patterns; and

(C) obtaining said data of interest by querying web sites in the plurality of web sites using the value and the extraction patterns in the respective descriptions of data of interest.

33. (New) The computer implemented method of claim 32 wherein each said extraction pattern comprises a pre-condition regular expression, a portion of data of interest regular expression, and a post-condition regular expression and wherein said developing comprises refining at least one of said pre-condition regular expression, said portion of data of interest regular expression, and said post-condition regular expression

34. (New) The computer implemented method of claim 32 wherein said data of interest is a product, information, or a service.